

**Notice of Allowability**

Application No.

10/047,216

Examiner

Thoi V. Duong

Applicant(s)

TAKEDA ET AL.

Art Unit

2871

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed February 13, 2006.
2. ☒ The allowed claim(s) ~~is~~ are 8-12.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 09/09/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### **DETAILED ACTION**

1. This office action is in response to the Amendment filed February 13, 2006.

Accordingly, claims 1-7 and 13-33 were amended. Currently, claims 8-12 are pending in this application.

### **EXAMINER'S AMENDMENT**

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In the title: change the title as "Liquid crystal device comprising an orientation control element giving an orientation regulating force to counteract an orientation regulating force given by an edge of pixel electrode."

### ***Allowable Subject Matter***

3. Claims 8-12 are allowed.

The following is an examiner's statement of reasons for allowance: none of the prior art of record fairly suggests or shows all of the limitations as claimed. Specifically,

Re claim 8, none of the prior art of record discloses, in combination with other limitations as claimed, a first orientation control element locally provided near an edge of the pixel electrode on the first substrate and giving an orientation regulating force to liquid crystal molecules near the edge of the pixel electrode on said first substrate, the orientation regulating force counteracting an orientation regulating force given by the

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edge of said pixel electrode to said liquid crystal molecules of the liquid crystal layer, so that said liquid crystal molecules including those near said edge are oriented in a substantially the same direction, when difference in orientation direction among said the liquid crystal molecules adjacent to each other near said edge is caused by the orientation regulating force given to the liquid crystal molecules of said liquid crystal layer by said edge of said pixel electrode when voltage is being applied between said pixel and opposed electrodes; and

a second orientation control element giving an orientation regulating force that orients the liquid crystal molecules of said liquid crystal layer in a predetermined direction different from the directions of the orientation regulating force given by the edge of the pixel electrode to the liquid crystal molecules of said liquid crystal layer and the orientation regulating force given by said first orientation control element.

The most relevant reference, USPN 6,567,144 131 of Kim et al. (Kim), fails to disclose or suggest a first orientation control element locally provided near an edge of the pixel electrode on the first substrate having the pixel electrode and the active element. As shown in Figs. 4-8, the Kim's reference discloses a first orientation control element 171 provided near an edge 19 of the pixel electrode 20 on the second substrate 100 and giving an orientation regulating force to counteract an orientation regulating force given by the edge of the pixel electrode, so that liquid crystal molecules including those near said edge are oriented in a substantially the same direction when voltage is being applied between the pixel and opposed electrodes (col. 6, lines 28-39 and col. 7, lines 50-52), and a second orientation control element 27 giving an

orientation regulating force that orients the liquid crystal molecules in a predetermined direction different from the directions of the orientation regulating force given by the edge of the pixel electrode and the orientation regulating force given by said first orientation control element.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

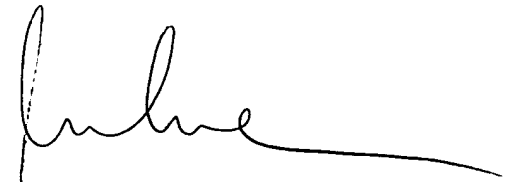
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (571) 272-2292. The examiner can normally be reached on Monday-Friday from 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached at (571) 272-2293.

Thoi Duong



02/22/2006



DUNG T. NGUYEN  
PRIMARY EXAMINER